



United States Department of Agriculture
Natural Resources Conservation Service

Plant Materials Center
Bismarck, North Dakota

BADLANDS Ecotype

Little Bluestem



Announcing the release of

BADLANDS Ecotype

Little Bluestem

Schizachyrium scoparium

A little bluestem adapted to
the Northern Great Plains

Potential Uses

Range Seeding

Prairie Restoration

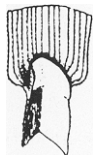
Prairie Landscaping

Plant Description

- ◆ Native warm-season bunchgrass
- ◆ Erect, medium height, 25-40 inches
- ◆ Deep, fibrous root system
- ◆ Basal portions of stems are flattened
- ◆ Leaves are slightly folded
- ◆ Leaves become reddish brown at maturity, red in fall/winter
- ◆ Mature seed heads become fluffy, white

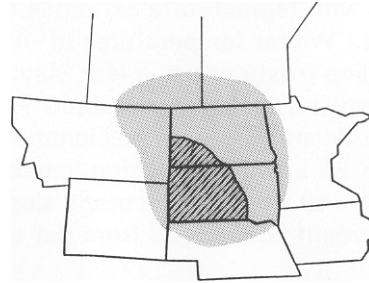


Flattened leaf
sheath



Papery ligule

Projected Area of Adaptation



Collection area of Badlands ecotype (lined)
and projected area of adaptation

Badlands Ecotype Features

- ◆ The source population is a composite of plants from 68 different sites, including the Badlands region of North Dakota and South Dakota
- ◆ A broad, genetic base with plants originating from many different range sites, but primarily shallow, thin upland, sandy, and silty
- ◆ Improved plant vigor, seed production, and disease resistance
- ◆ Variation in plant size, leaf width, and color
- ◆ Plant color varies from light to dark green with occasional blue plants
- ◆ Phenology may vary up to two weeks within the population
- ◆ First seed matures generally in late August at Bismarck, ND
- ◆ Approximately 4 weeks earlier in maturity compared to Blaze and Camper
- ◆ Original area of collections includes USDA Plant Hardiness Zones 2, 3, & 4

Establishment

- ◆ Seed from mid-May to mid-June
- ◆ Shallow seeding depth of .25 to .5 inches is critical
- ◆ Plant through fluffy seedbox with grass drill unless the seed is debarbed
- ◆ Plant at a seeding rate of 25 to 30 pure live seeds (PLS) per ft² if planted alone (4.2 to 5.0 PLS lb/ac); generally little bluestem is one component of a range mix, so rate varies depending on percent desired in the stand
- ◆ Number of seeds/lb averages 270,000; debarbed seed will vary from this amount
- ◆ Accent plants for landscaping are generally spaced at 1 to 2 feet

Management

- ◆ Proper grazing would include not removing more than half of the new growth during the growing season
- ◆ Quality declines with growth stage, dropping rapidly as the plant matures and sets seed
- ◆ Prescribed burning in late winter or spring will increase seed production and improve forage quality
- ◆ Without proper use or burning, little bluestem can form dead centers
- ◆ Plant crowns may suffer severe damage when burned during dry conditions

Seed Production

- ◆ Seed harvest can be accomplished by combining or stripping
- ◆ Because of the light, fluffy seed, air should be reduced or closed
- ◆ Variable seed maturity, even on the same plant, is common
- ◆ Seed strippers can be used after seeds have reached the "full-fluff" stage, but before heavy shattering occurs
- ◆ Annual seed yields can be extremely variable
- ◆ Clean seed yields at the Bismarck Plant Materials Center have averaged 100 to 200 lb/ac with irrigation and 42-inch row spacing

Seed unit



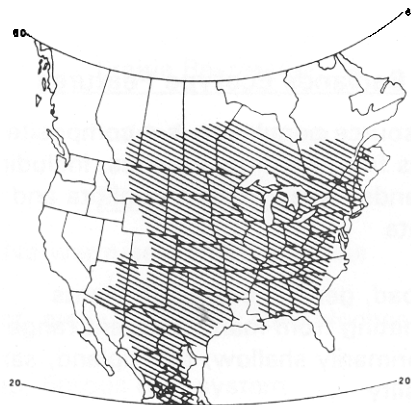
Seed Availability

Generation 2 seed, equivalent to foundation seed, is available for seed increase from the USDA, NRCS Plant Materials Center, Bismarck, North Dakota. Certified seed is available from various commercial vendors. Contact your local USDA, NRCS Field Office or the Bismarck Plant Materials Center for a list of vendors.

Origin

Selected plants comprising Badlands little bluestem originated from 68 different sites in southwestern North Dakota and western and central South Dakota. The diverse genetic plant material was collected vegetatively on 10 different range sites.

The climate within the collection area is temperate with temperature extremes being the normal. Winter temperatures of -40°F may occur. Killing frosts occur in late May. The average growing season varies from 120 to 140 days. Average annual precipitation varies from 12 to 23 inches. Elevation varied from 1,250 to 4,440 feet. The average slope was about 8 percent and ranged from flat to 30 percent.



Natural distribution of little bluestem

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